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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,596	01/06/2006	Motohiro Suzuki	283923US0PCT	3254
22850	7590	09/10/2007		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER SCOTT, ANGELA C	
			ART UNIT 1709	PAPER NUMBER
			NOTIFICATION DATE 09/10/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/563,596

Applicant(s)

SUZUKI ET AL.

Examiner

Angela C. Scott

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 04/06 & 04/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamabe et al. (US 5,709,956) in view of Yamane et al. (US 6,465,099) when taken with Masuda et al. (US 5,994,439).

Regarding claims 1, 2 and 4, Yamabe et al. teaches a pelletized (Col. 7, lines 8-10) resin composition (referred to as D in the claims and hereinafter, composition D) comprising from 5 to 75 weight percent of the vinyl chloride resin (A), from 5 to 70 weight percent of the partially crosslinked acrylonitrile-butadiene copolymer (C), and from 10 to 65 weight percent of the plasticizer (B) (Col. 6, lines 24-27). The average degree of polymerization of the vinyl chloride

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is preferably at least 2000 (Col. 5, lines 43-50), making the vinyl chloride have a high average polymerization degree.

Yamabe et al. does not teach a powder composition comprising a vinyl chloride resin having a low average polymerization degree and a plasticizer (referred to as E in the claims and hereinafter, composition E) being mixed with composition D to form a combined composition. However, Yamane et al. does teach a powder (Col. 9, lines 29-30) vinyl chloride resin composition (E) (Col. 3, line 6) comprising 100 parts by weight of a vinyl chloride resin (Col. 3, lines 10-11) and a plasticizer (Col. 9, line 20). The average polymerization degree of the vinyl chloride resin used in this composition is preferably 450-1800 (Col. 5, lines 11-13), making the vinyl chloride resin have a low average polymerization degree. Yamabe et al. and Yamane et al. are combinable because they are from the same field of endeavor, namely, vinyl chloride compositions. At the time of the invention, a person of ordinary skill in the art would have found it obvious to combine composition E, as taught by Yamane et al., with composition D, as taught by Yamabe et al., in order to make a combined composition, and would have been motivated to do so because, as evidenced by Masuda et al., having a composition combining vinyl chloride resins having different degrees of average polymerization gives the desired properties that come with each individually such as strength and processibility (Col. 2, lines 26-35).

Regarding claim 3, Yamabe et al. teaches that the partially crosslinked acrylonitrile/butadiene copolymer preferably has from 20 to 45 weight percent acrylonitrile content. Yamabe et al. additionally teaches that the copolymer is insoluble in methyl ethyl ketone.

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Yamabe et al. does not teach that the copolymer contains from 55 to 80% of butadiene. However, it follows that if 20 to 45 percent of the copolymer is acrylonitrile, then 55 to 80% of the copolymer, the balance of the copolymer, is butadiene.

Yamabe et al. does not teach that the methyl ethyl ketone insoluble content is from 20 to 95%. However, it is well known in the art to change result effective variables such as an insolubility content. At the time of the invention, a person of ordinary skill in the art would have found it obvious to have found the optimized range of the insoluble content through routine experimentation, as is known in the art, for the copolymer, as taught by Yamabe et al., and would have been motivated to do so in order to obtain the desired properties of the copolymer. See MPEP §2144.05.

Regarding claim 5, Yamabe et al. does not teach that the blend ratio of composition D to composition E is from 5/95 to 95/5. However, it is well known in the art to change result effective variables such as concentrations. At the time of the invention, a person of ordinary skill in the art would have found it obvious to obtain the optimized blending range, as is known in the art, for the compositions, as taught and combined above, and would have been motivated to do so in order to obtain the desired properties of the overall composition. See MPEP §2144.05.

Regarding claim 6, Yamabe et al. does not teach that the average size of composition D is from 1 to 8 mm. However, it is well known in the art to change result effective variables such as length. At the time of the invention, a person of ordinary skill in the art would have found it obvious to obtain the optimized the length, as is known in the art, for composition D, as taught

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above, and would have been motivated to do so in order to obtain the desired properties of composition D. See MPEP §2144.05.

Yamabe et al. does not teach that the average particle diameter of composition E is from 100 to 2000 μm . However, it is well known in the art to change result effective variables such as diameter size. At the time of the invention, a person of ordinary skill in the art would have found it obvious to obtain the optimized diameter size, as is known in the art, for composition E, as taught above, and would have been motivated to do so in order to obtain the desired properties of composition E. See MPEP §2144.05.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Doak (US 4,469,844) and Tedder et al. (US 2004/0240809) relate to combining vinyl chloride resins of different molecular weights. Schramm et al. (US 5,070,055) relates to combining thermoplastic elastomers of different molecular weights.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela C. Scott whose telephone number is (571) 274-3303. The examiner can normally be reached on Monday through Friday, 7:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACS

August 27, 2007


MARK EASHOO, PH.D.
SUPERVISORY PATENT EXAMINER

01 / Sep / 07